REMARKS

Responsive to the Office action mailed September 26, 2005, applicant request entry of the foregoing amendments, consideration of the following remarks and reconsideration of the rejections set forth in said office action.

Claims 1-22 and 26-30 were rejected under 35 USC 103(a) as being unpatentable over Munday et al '409. Applicant respectfully submits that Munday et al '409 fails to render obvious the present invention.

The present invention is directed toward the discovery of a stabilized basic hydrogen peroxide composition. The use of alkaline hydrogen peroxide formulations for cleaning is known. The use of hydrogen peroxide in alkaline cleaning compositions has been hindered by the strong tendency of alkaline hydrogen peroxide compositions to decompose during storage. Under typical storage conditions, decomposition may produce hydroxide ions, which increases the pH and thus further increases the decomposition rate. The present invention is directed to hydrogen peroxide compositions that are stable at alkaline conditions. Exemplary compositions exhibited less than 10% hydrogen peroxide loss after storage for 24 hours at 85°C. The compositions comprise: a stabilizer system comprising: (a) about 10 ppm by weight to about 1 wt% of a stannate stabilizer; (b) about 10 ppm by weight to about 1 wt% of a phosphonic acid chelating agent or a mixture of phosphonic acid chelating agents; and (c) about 10 ppm by weight to about 1 wt% of an aromatic chelating agent or a mixture of aromatic chelating agents; wherein the composition comprises less than 1 ppm of pyrophosphate; and the composition has a pH greater than 7.0.

The data in the present application shows that hydrogen peroxide stability at alkaline pHs is only provided by the three component stabilizer system claimed in the present application. Two component combinations of the components of the present invention do not provide the stability of the claimed composition and would not be acceptable for commercial products because of the decomposition of the hydrogen peroxide.

The examiner has characterized Munday et al '409 as disclosing basic hydrogen peroxide solutions stabilized with a stannate and a complexing agent such as 8-hydroxyquinoline, or an organic phosphonic compound. Applicants respectfully submit that Munday et al '409 does not disclose a stable, alkaline hydrogen peroxide solution. Munday et al '409 discloses acidic hydrogen peroxide solutions. See column 3, lines 3-14 where adjustment of the pH of the hydrogen peroxide solution to the "natural pH of the hydrogen peroxide" is described. This "natural pH" referred to by Munday et al. '349 is acidic as shown by column 3, line 8 or the examples where the pH of the hydrogen peroxide solution is adjusted to pH 3.7 or 3.0 respectively.

Munday et al. '409 discloses the preparation of a high pH "stock solution" of a stannate and sodium hydroxide. A small amount of this "stock solution" is added to concentrated hydrogen peroxide prior to or with the addition of a complexing agent (a phosphonic acid is used in the examples). In example 1, 12 ml of this high pH stock solution is added to 1 liter of 70% hydrogen peroxide. Such a concentrated hydrogen peroxide would have a "natural" acidic pH. The pH of the resulting solution is adjusted to an acidic pH (such as pH 3 set forth in the examples). There is no disclosure in Munday et al. '409 of a stable hydrogen peroxide solution having an alkaline pH. Applicants submit that Munday et al '409 only discloses acidic stabilized hydrogen peroxide solutions.

The data in the present application shows that at alkaline pHs a single phosphonic acid does not provide stability, see Table 1. Further, the data shows that at alkaline pH's, pyrophosphate destabilizes hydrogen peroxide, see Table 4. Munday et al. '349 identifies pyrophosphate as an effective complexing agent, see column 3, line 50. Furthermore, Munday et al. '349 identifies a phosphonic acid as an effective complexing agent, see column 3, line 50 and the examples. Clearly, Munday et al. '349 is directed to acidic stabilized hydrogen peroxide, not alkaline stabilized hydrogen peroxide.

Testing was undertaken to measure the stability and "unadjusted" pH of the combination of Munday et al. '409. The testing and results are summarized in the Declaration Under 37 CFR 1.132 attached hereto. The testing shows that the combination of Munday et al. '409 is acidic even before the pH is adjusted with acid. The results also show that the stability of the unadjusted, acidic combination is less

than the stability of the preferred, alkaline combination of the present invention.

Applicants further submit that there is no disclosure in Munday et al. '409 of a three component stabilizing composition as claimed in the present application. There is no mention of mixtures of the complexing agents disclosed in Munday et al. '409, let alone disclosure of the specific three component mixture of the present invention which provides results that two component mixtures do not provide. Thus Munday et al. '349 fails to render obvious the high pH stabile hydrogen peroxide composition of the present invention where the stabilizer system is the three component mixture set forth in the claims.

The data in the present application shows that stability of hydrogen peroxide solutions at alkaline pHs is only provided by the three component stabilizer system claimed in the present application. Two component combinations of the components of the present invention do not provide the required stability. See Tables 1, 2 and 3.

Claims 23 –25 were rejected under 35 USC 103(a) as being unpatentable over Munday et al. '409 further in view of Sugihara et al. '311. Applicants submit that Sugihara et al. '311 fails to remedy the deficiencies noted above with respect to Munday et al. '409.

Sugihara et al. '31 discloses a basic cleaning solution that comprises hydrogen peroxide, ammonia and a chelating agent having a least two phosphonic acid groups. There is no disclosure of the three component stabilizer system of the present invention. The data in the present application shows that a phosphonic acid chelating agent alone does not provide the stability of the alkaline hydrogen peroxide solutions that the present invention provides, see Table 1. Applicants submit that Sugihara et al. '311 neither alone nor in combination with Munday et al. '409 renders obvious the present invention.

In view of the foregoing remarks, applicant respectfully submits that claims 1 - 30 of the present application are in condition for allowance and prompt favorable action is solicited.

Respectfully submitted,

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